CLAIMS

What is claimed is:

1. A turbo decoding system, comprising:
   a decoder module, using an adaptive abort criterion;
   wherein the adaptive abort criterion is based on the mean and the variance of partially decoded extrinsics.

2. The system of Claim 1, wherein the abort criterion is generated as a ratio of the mean and the variance of the extrinsics.

3. An iterative decoder system for a recursive systematic encoder, comprising:
   a decoder module, wherein estimates of data symbols are generated through an iterative decoding process;
   a comparison algorithm for comparing a derived quality attribute of the generated data symbol estimates to a predetermined threshold;
   wherein said quality attribute is based on the mean and the variance of the estimates of the data symbols;
   and wherein decoding is aborted based on the comparison result.

4. The system of Claim 3, wherein the quality attribute is generated as a ratio of the mean and the variance of the estimates.

5. A method for determining an abort criterion in turbo decoding, comprising the steps of:

generating extrinsic values;

for each extrinsic value, generating a signal-to-noise ratio;

comparing the generated signal-to-noise ratio to a threshold signal-to-noise ratio; and

aborting based on the comparison result;

wherein said signal-to-noise ratio is computed from the mean and the variance of the extrinsics.

6. The method of Claim 5, wherein the signal-to-noise ratio is computed by dividing the mean of the extrinsic values by the variance of the extrinsic values.

7. A method for determining an abort criterion in iterative decoding, comprising the steps of:

generating estimates of data symbols;

generating a quality attribute based on the mean and variance of the estimates;

comparing the quality attribute to a predetermined threshold;

aborting the turbo decoding based on the comparison result.

8. The method of Claim 7, wherein the quality attribute is generated as a ratio of the mean and the variance of the estimates.

9. A method for determining an abort criterion in iterative decoding, comprising the steps of:

generating estimates of data symbols after an iteration substep;

measuring the mean of the estimates;

measuring the variance of the estimates;

generating a quality attribute based on the mean and the variance;

comparing the quality attribute to a predetermined threshold; and

aborting the turbo decoding based on the comparison result.

10. The method of Claim 9, wherein the quality attribute is generated as a ratio of the mean and the variance of the estimates.